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the step of controlling further comprises the step of converting the wired protocol information included in the data with the wireless protocol information for transmission by the associated radio when the data is received from the wired network for the one wireless device.

-- R E M A R K S --

Claims 1 to 20 are presently pending in the subject patent application. Claims 1, 2, 3 to 14, and 16 to 20 stand rejected under 35 USC 103(a) as being unpatentable over Alexander (US 6,272,120) in view of Meier (US 6,046,992). Claims 10 to 12 and 18 to 20 have been canceled, and claims 1 to 9 and 13 to 16 amended, as set out above. The page entitled "Version with Markings Showing Changes Made", identifies the changes made to the claims by this amendment.

In paragraph 5 of the Office Action, the Examiner admitted that claims 3 and 15 would be allowable if rewritten in independent form, including the limitations of the base claim. The Applicant has amended independent claim 1 by incorporating a substantial portion of dependent claim 3 into claim 1, and by relocating a non-essential feature of claim 1 to dependent claim 2. Similarly, the Applicant has amended independent claim 13 by incorporating a substantial portion of dependent claim 15 into claim 13, and by relocating a non-essential feature of claim 13 to dependent claim 14. The Applicant has also made insubstantial amendments to the dependent claims as a consequence of the amendments to independent claims 1 and 13.

The Applicant submits that the art cited by the Examiner is insufficient to sustain a *prima facie* obviousness rejection of the claimed invention. The basis for the Applicant's submission is that Meier fails to include the requisite suggestion or motivation to modify Alexander so as to arrive at the invention claimed. The Applicant's submission will be discussed in detail below, commencing with a review of claim 1 of the subject patent application.

Independent claim 1

New independent claim 1 of the subject patent application recites a communication device for facilitating communication between a wired network having a wired communication device, and wireless devices including a first type wireless device and a second type wireless device. The communication device, as claimed, comprises:

- a wired network interface for interfacing data communication between the communication device and the wired communication device of the wired network;

- a first type radio for interfacing data communication between the communication device and the first type wireless device;

- a second type radio for interfacing data communication between the communication device and the second type wireless device, the second type radio being different than the first type radio; and

- a data controller for controlling data traffic between the wired network and the wireless devices, the data controller including a filter device for filtering data for transmission by one of the radios when the data is received from the wired network for the respective wireless device.

Alexander (US 6,272,120)

Alexander describes a bridge for coupling multiple LANs together. The bridge includes two or more radio devices. At column 5, lines 50 to 60 of the patent, Alexander discloses that the multi-radio bridge can simultaneously include radios that use FH and radios that use DS. However, at column 9, lines 16 to 38, Alexander states that the radios of the multi-radio bridge are equivalent to one another. Consequently, Alexander would not suggest to the person of ordinary skill a wireless bridge having different types of radios.

At column 7, line 66 to column 8, line 3 of the patent, Alexander discloses that the multi-radio bridge can employ a single antenna, and a multiplexer having a filter for

filtering or separating the signals being transmitted. However, the filter only serves to separate the data received by the antenna into the frequency bands assigned to the respective radios. The filter does not filter the data received from the wired network prior to transmission by the radios. Consequently, Alexander would not suggest to the person of ordinary skill a wireless bridge having different types of radios, and a data controller that filtered data received from the wired network.

Meier (US 6,046,992)

Meier describes a wireless local area network having a spanning tree structure. As shown in Fig. 1 of the patent, the LAN comprises a host computer 10, a gateway 20, a number of bridges in communication with the gateway 20, and RF terminals in communication with the bridges. The gateway 20 (also referred to as a root node) communicates with other the bridges 40, 44 through two independent RF links.

At column 4, lines 55 to 57, Meier discloses that both of the RF links use a spread-spectrum polling protocol. Meier does not teach or suggest that the radio used to implement one of the RF links would use a spread-spectrum protocol, and the radio used to implement the other RF link would use another protocol. In fact, Meier fails to disclose that the LAN incorporates different types or classes of RF terminals or bridges. Consequently, Meier would not suggest to the person of ordinary skill a wireless gateway having different types of radios.

Meier also fails to disclose the use of a data filter. Consequently, Meier would not suggest to the person of ordinary skill a wireless gateway having different types of radios, and a data controller that filtered data received from the wired network.

Summary re Alexander and Meier

Alexander fails to teach a wireless communication device having different types of radios for communicating with different types of wireless devices. Alexander also fails to teach a wireless communication device having a filter for filtering data

received from the wired network for transmission by the radios. Meier fails to teach a wireless communication device having different types of radios or a filter for filtering data received from the wired network for transmission by the radios. Consequently, Meier fails to include the requisite suggestion to modify Alexander to maintain a *prima facie* obviousness rejection of the invention recited in claim 1 of the subject patent application.

Also, as the Court of Appeal for the Federal Circuit explained in *Re Sang-Su Lee* 00-1158, Serial No. 07/631,240, January 18, 2002, although a *prima facie* case of obviousness can be maintained if a person of ordinary skill would be motivated to modify the primary patent reference to achieve the claimed invention, the motivation for the modification must not be based on subjective belief, but instead must be based on concrete evidence in the record. The Court explained:

“With respect to Lee’s application, neither the examiner nor the Board adequately supported the selection and combination of the Nortrup and Thunderchopper references to render obvious that which Lee described. The examiner’s conclusory statements that “the demonstration mode is just a programmable feature which can be used in many different device[s] for providing automatic introduction by adding the proper programming software” and that “another motivation would be that the automatic demonstration mode is user friendly and it functions as a tutorial” do not adequately address the issue of motivation to combine. The factual question of motivation is material to patentability, and could not be resolved on subjective belief and unknown authority. It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to “[use] that which the inventor taught against its teacher.” *W.L. Gore v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983). Thus the Board must not only assure that the requisite findings are made, based on evidence of record, but must also explain the reasoning by which the findings are deemed to support the agency’s conclusion.”

Further, as the Court of Appeals for the Federal Circuit held in *re Gordon*, 221 USPQ 1125, 1127 (CAFC. 1984), the mere fact that the cited art could be modified

to arrive at a claimed invention does not render an invention obvious in view of cited art. Rather, as the Court explained, the appropriate inquiry under 35 USC 103(a) was whether the prior art would have suggested the desirability of the invention.

Since both Alexander and Meier fail to explain why a person of ordinary skill would want to modify a dual-radio wireless bridge (implemented for the purpose of communicating with other bridges in a LAN) to use different types of radios, or a filter for filtering data prior to transmission by the radios, the art cited fails to include the requisite evidence of motivation for the modification of Alexander.

In view of the foregoing, the Applicant submits that the cited art is insufficient to sustain a *prima facie* obviousness rejection of the invention recited in independent claim 1. Since claims 2 to 9 depend from claim 1, the foregoing submissions apply equally to claims 2 to 9. Accordingly, the Applicant respectfully requests that the Examiner's rejection of claims 1 to 9 be withdrawn.

Independent claim 13

New independent claim 13 of the subject patent application recites a method for facilitating communication between a wired network having a wired communication device, and wireless devices including a first type wireless device and a second type wireless device. The method steps recited correspond to the apparatus means recited in independent claim 1. Accordingly, for the reasons presented with respect to claim 1 above, the Applicant submits that the cited art is insufficient to sustain a *prima facie* obviousness rejection of the invention recited in independent claim 13.

Since claims 14 to 17 depend from claim 13, the foregoing submissions apply equally to claims 14 to 17. Accordingly, the Applicant respectfully requests that the Examiner's rejection of claims 13 to 17 be withdrawn.

Favourable consideration of the foregoing submission is respectfully requested.

If any additional fees are required by the foregoing amendments, including any fees for extension of time, permission is hereby granted to debit our deposit account number 07-1750.

If the Examiner wishes to discuss any aspect of this amendment, please contact the Applicant's patent agent, Mr. Robert Graham, at (416) 862-4425.

Respectfully submitted,



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VERSION WITH MARKINGS SHOWING CHANGES MADE

1. [Amended] A [bridge apparatus for bridging] communication device for facilitating communication between a wired network having a wired communication [devices] device, and wireless devices including a first type wireless [devices] device and a second type wireless [devices] device, the [bridge apparatus] communication device comprising:

a wired network interface for interfacing data communication between the [bridge apparatus] communication device and the wired communication devices of the wired network;

a first type radio for interfacing data communication between the [bridge apparatus] communication device and the first type wireless devices;

a second type radio for interfacing data communication between the [bridge apparatus] communication device and the second type wireless devices; and

a [bridge] data controller for controlling data traffic between the wired network and the [first and second type] wireless devices, the [bridge] data controller [functioning in a first mode using the first type radio when data is transmitted from or destined for the first type wireless devices, and functioning in a second mode using the second type radio when data is transmitted from or destined for the second type wireless devices] including a filter device for filtering data for transmission by one of the radios when the data is received from the wired network for the respective wireless device.

2. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein:

[each of the first type wireless devices is assigned with an address] the wireless devices are assigned a respective address, and data sent from and destined for [one of the first type] the wireless devices includes the address of the [one of the first type wireless devices] respective wireless device; and

the [bridge] data controller functions [in the first and second modes] in a first mode using the first type radio when data is transmitted from or destined for

the first type wireless device, and functions in a second mode using the second type radio when data is transmitted from or destined for the second type wireless device, the first and second modes being selected in accordance with the address included in the data.

3. [Amended] The [bridge apparatus] communication device as claimed in claim 2, wherein:

the [first type wireless] devices [uses] have a capacity which is lower than a capacity of the wired network[]; and

the bridge controller has a filter device for filtering data for transmission by the first type radio when the data is received from the wired network for the first type wireless devices].

4. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein

data sent from [the second type] one of the wireless devices includes wireless protocol information which indicates a wireless protocol used for communicating the data, and data sent from the wired network includes wired protocol information which indicates a wired protocol used for communicating data over the wired network; and

the [bridge] data controller has a protocol converter for converting the wired protocol information included in data with the wireless protocol information for transmission by the [second type] associated radio when the data is received from the wired network for the [second type wireless devices] one wireless device.

5. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein the first type radio comprises a first radio having a first radio coverage area, and the second type radio comprises a second radio [which has] having similar characteristics to the first radio and [has] having a second radio coverage which is different from the first radio coverage area.

6. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein said first type radio is in accordance with the IEEE 802.11 specification.
7. [Amended] The [bridge apparatus] communication device as claimed in claim 6, wherein said first type radio is a frequency-hopper radio.
8. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein said second type radio is in accordance with the IEEE 802.11 specification.
9. [Amended] The [bridge apparatus] communication device as claimed in claim 1, wherein said first type radio and said second type radio are in accordance with the IEEE 802.11 specification.
10. [Cancelled]
11. [Cancelled]
12. [Cancelled]
13. [Amended] A method for [bridging] facilitating communication between a wired network having a wired communication [devices] device, and wireless devices including a first type wireless [devices] device and a second type wireless [devices] device, the method comprising the steps of:
- receiving data from the wired communication [devices] devices of the wired network;
 - [controlling data traffic between the wired network and the first and second type wireless devices;]
 - using a first type radio for transmitting data to the first type wireless device;
 - [and]
 - using a second type radio for transmitting data to the second type wireless device, the second type radio being different than the first type radio; and

controlling data traffic between the wired network and the wireless devices, the data controlling step comprising filtering the data for transmission by one of the radios when the data is received from the wired network for the respective wireless device.

14. [Amended] The method as claimed in claim 13 wherein:

[each of] the [first type] wireless devices [is] are assigned with [an] a respective address, and data sent from and destined for [one of the first type] the wireless devices includes the address of the [one of the first type wireless devices] respective wireless device; and

the step of controlling [uses] comprises using the first or second type radio in accordance with the address included in the data.

15. [Amended] The method as claimed in claim 14 wherein:

the [first type] wireless devices [use] have a capacity which is lower than a capacity of the wired network[; and

the step of controlling comprises the step of filtering data for transmission by the first type radio when the data is received from the wired network for the first type wireless devices].

16. [Amended] The method as claimed in claim 14 wherein

data sent from [the second type] one of the wireless devices includes wireless protocol information which indicates a wireless protocol used for communicating the data, and data sent from the wired network includes wired protocol information which indicates a wired protocol used for communicating data over the wired network; and

the step of controlling further comprises the step of converting the wired protocol information included in the data with the wireless protocol information for transmission by the [second type] associated radio when the data is received from the wired network for the [second type wireless devices] one wireless device.

18. [Cancelled]

19. [Cancelled]

20. [Cancelled]